

## NEW SPECIES AND FORMS FROM THE CENTRAL AND SOUTHERN UNITED STATES

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DURING late winter and through the spring of 1930, another great-circle tour southward was undertaken by the author. This trip began in the latter part of February and was completed by the beginning of June.

Leaving Chicago, a southeasterly direction was taken over the Ohio River valley, the Allegheny foot-hills and thence through Alabama, striking the Gulf of Mexico near the Florida line; thence zigzagging coast-wise west and southwest all the way to the border of Mexico about Brownsville, Texas, coming scarcely 100 km. inland at any point. The return trip was made over the edge of the Great Plains, through the Ozark region and crossing the Mississippi River at Quincy, Illinois. Numerous exploratory side-trips were made, so completing some 5,000 km. of travel, by making use of a great variety of transportation.

Specimens and, in most cases, duplicates with notes were taken of such plants as indicated extension of range, flowering season or other unusual data, or promised new taxonomic material, some of which is being studied by other workers, mostly specialists; but my own work with a portion of the collection has yielded some novelties which are now available for publication.

I. The *Eustoma* noted about the mouth of the Rio Grande at the time of the visit was of the smaller-flowered species—*E. exaltatum*—brightening the landscape in purple, but very locally. One small colony was seen in which the corollas were pure white. This may be separated as:

*EUSTOMA EXALTATUM* (L.) Griseb., forma **albiflorum**, f. nov., corolla alba, siccato ochroleuca.—TEXAS: Brownsville, Cameron County, March 25, 1930. *H. C. Benke* 5409 (TYPE, Field Museum).

With the species; corolla white, turning cream-color on drying.

II. *Verbena officinalis*, like many other species which are adventitious from the old world, occurs only locally, but in large and well-established colonies, for it is one which takes kindly to its new environment. It was seen at points in Texas with its very small corolla in purple hue rather different from descriptions in European Floras as white, pale lilac or lilac in color.

At Kingsville was noted a very considerable colony of this species,



with beautiful rose-purple corollas, differing strikingly from the others, and from descriptions alluded to. No plants with white corollas came under observation. The new color-form:

VERBENA OFFICINALIS L., forma **roseiflora**, f. nov., corolla intense rosea.—TEXAS: Kingsville, Kleberg County, March 28, 1930. *H. C. Benke* 5418 (TYPE, Field Museum).

Corolla deep rose-color, otherwise like the species.

III. In the case of *Stachys agraria*, which is rather common in coastal Texas, the albino form is rare—only a few plants having been seen and these in but one locality near Corpus Christi. The species usually had corollas of an attractive purple-blue, with the coloration extended to the calyx-teeth. The unusual form:

STACHYS AGRARIA Cham. & Schlecht., forma **albiflora**, f. nov., corolla alba; calicis dentibus viridibus.—TEXAS: Corpus Christi, Nueces County, March 31, 1930. *H. C. Benke* 5420 (TYPE, Field Museum).

With the species; corolla pure white; calyx-teeth green.

IV. For some time past, the Colby brothers have been mentioning some "beautiful pink Blood-root" as occurring in the woodlands about Crystal Lake, Illinois, but it was not until this spring, 1932, that some specimens were sent me by Mr. Earl H. Colby of Crystal Lake. The brothers are all friends of nature, and especially of the wild flowers—one of them, Mr. Carl Colby of Pittsville, Wisconsin, has on various occasions sent in rare and interesting specimens which may be seen in Field Museum and other Herbaria. It is deemed very appropriate to name this rare plant for the brothers:

SANGUINARIA CANADENSIS L., forma **Colbyorum**, f. nov., petala laete rosea.—ILLINOIS: Crystal Lake, McHenry County, May 1, 1932. *Earl H. Colby* Mus. No. 652805 (TYPE, Field Museum).

With the species; petals bright pink.

In the fall of 1931, my trip through the Illinois Ozarks in the far southern portion of the state was rewarded in uncovering some new plants, two of which are ready for recording as below:

V. *ZIZIA sylvatica*, sp. nov., planta *Z. cordatae* similis sed gracilior altiorque; foliis radicalibus cordatis, caulinorum uno vel pluribus quoque cordatis, nullo modo lobatis; foliis superioribus 2–3 ternatim decompositis vel lobatis.—ILLINOIS: Tunnel Hill, Johnson County, Sept. 5, 1931. *H. C. Benke* 5252 (TYPE, Field Museum).

Aspect of *Z. cordata*, but more slender and tall; basal leaves cordate, and in addition one or more cauline leaves also cordate, long-petioled and not at all lobed; uppermost leaves 2 to 3-ternately compound or variously lobed.



Plants were seen in considerable numbers in a region which is wild and primitive, but all in the deep shaded woods, hence the name.

The type specimen has 6 to 8 rays in the umbels; lower two cauline leaves ovate-cordate, undivided, the first or lower 5 cm. wide x 6 cm. long, 12 cm. up the stem, the second 4 x 6 cm., about 14 cm. farther up (at  $\frac{3}{4}$  distance up the entire plant); petiole of lower cauline cordate leaf 10 cm. long, of upper 3 cm. long; uppermost leaves as described above.

There is one other specimen of this species in Field Museum Herbarium and it also is from Illinois. It was recorded as *Z. cordata* (Walt.) DC. ILLINOIS: Beverly Hills, L. Chicago Basin, Cook County, June 24, 1920. *Donald C. Peattie* 457. One long-petioled, cordate leaf occurs on the stem, 18 cm. above the base—about half-way up.<sup>1</sup>

The position of this species among others of the genus *Zizia* is seen in the following key:

- a. Leaves all 2-3 (5)-ternately compound or lobed.....b.
- b. Umbel of many (averaging about 18) stout rays; plant of fields and meadows, mostly.....*Z. aurea* (L.) Koch.
- b. Umbel of few (av. about 8) weak rays; plant of woodlands, mostly.....*Z. Bebbii* (Coult. & Rose) Britton.
- a. Some of the leaves cordate, undivided, long-petioled.....c.
- c. Cauline leaves all divided; rays of umbel rather as in *Z. aurea*; plants mostly of open ground.....*Z. cordata* (Walt.) DC.
- c. One or more cauline leaves undivided; other leaves and umbel rather as in *Z. Bebbii*; plants of shaded woods.....*Z. sylvatica*.

VI. Among the hills of southern Illinois, particularly in the swamps and valleys below, there occur patches of beautiful caerulean blue of the *Eupatorium coelestinum* in its season, reminding one very much of that garden favorite, *Ageratum*. In several places this was varied by the same species in most charming and impressive red-purple, hence:

*EUPATORIUM COELESTINUM* L., forma **illinoense**, f. nov., formae typicae similis, floribus pulchre rubro-purpureis differt.—ILLINOIS: Creal Springs, Williamson County, Sept. 6, 1931. *H. C. Benke* 5272 (TYPE, Field Museum).

Like the species, but with the flowers of a rich red-purple color.

Some miles away, but in the same county, a colony of the same form had been seen, a specimen is also in Field Museum Herbarium, ILLINOIS: Marion, Williamson County, Sept. 3, 1931. *Benke* No. 5271.

I have seen the species in neighboring states, but not in this novel form (though it may be expected to occur), hence the name.

CHICAGO, ILLINOIS.

<sup>1</sup> This specimen bears the notation on the label "shaded ditch," which would further seem to confirm the habitat of this species.